BRUHAT BANGALORE MAHANAGARA PALIKE

Name of Work: Modified Estimate for Asphalting to roads at Chowdappa layout , Maruthi Layout, Hillside Medows and surrounding areas in ward no -03 Yelahanka Satellite Town sub Division

Sl No	Description of work	Unit	No	Length m	Breadth m	Depth m	Quantity	Rate in Rs	Amount in Rs
1	KSRRB 300-1. Earth work excavation by manual means in Ordinary Soil soil involving an average horizontal throw upto 2 meters and an average lift upto 0.5m, excavated surface leveled and sides neatly dressed, the disposed earth to be leveled neatly after breaking of clods complete as per specifications complete as per specifications.MORTH chapter 3.P No. 143/ Item No. 19.1/ PWD SR 2018-19								
	RCC Drain	Cum							
	BHEL Layout								
	3rd cross road LHS		1	118.00	1.10	1.00	129.80		
	4th cross road LHS		1	115.00	1.10	1.00	126.50		
	4th cross road RHS		1	115.00	1.10	1.00	126.50		
	5th cross road LHS		1	110.00	1.10	1.00	121.00		
	5th cross road RHS		1	110.00	1.10	1.00	121.00		
	12th cross road LHS		1	53.60	1.10	1.00	58.96		
	12th cross road RHS		1	53.00	1.10	1.00	58.30		
	Culvert		2	5.35	1.50	1.00	16.05		
							758.11	211.79	**160560.12**
	Approved Rate Rs.=	211.79							
2	KSRRMBM2990 Plain cement concrete of mix M10 MIX with crushed stone aggregaes 40mm nomial size mechanically mixed, placed infoundation and compacted by viberation including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. p No. 254/ Item No. 34.2/PWD SR 2018-19								
	RCC Drain	Cum							
	BHEL Layout								
	3rd cross road LHS		1	118.00	1.10	0.15	19.47		
	4th cross road LHS		1	115.00	1.10	0.15	18.98		
	4th cross road RHS		1	115.00	1.10	0.15	18.98		
	5th cross road LHS		1	110.00	1.10	0.15	18.15		
	5th cross road RHS		1	110.00	1.10	0.15	18.15		
	12th cross road LHS		1	53.60	1.10	0.15	8.84		
	12th cross road RHS		1	53.00	1.10	0.15	8.75		
	Culvert		2	5.35	1.50	0.15	2.41		
							113.72	4479.56	**509399.88**
	Approved Rate Rs.=	4479.56							
3	providing and laying plain/reinforced cement concrete foe drain walls and bottom thickness 15cm using M20 nominal mix concrete with OPC at 300kgs. With 20mm and down size granite metal coarse aggregates at 0.69cum and fine aggregates at 0.43 cum machine mixed, well compacted for walls and bottom including centring, shuttering, cost of materials, HOM of machinery, curing etc., completed as per specification.								
	RCC Drain	Cum							
	Raft								
	BHEL Layout								
	3rd cross road LHS		1	118.00	0.90	0.15	15.93		
	4th cross road LHS		1	115.00	0.90	0.15	15.53		
	4th cross road RHS		1	115.00	0.90	0.15	15.53		

	Description of work	Unit	No	Length	Breadth	Depth	Quantity	Rate	Amount
				m	m	m		in Rs	in Rs
	5th cross road LHS		1	110.00	0.90	0.15	14.85		
	5th cross road RHS		1	110.00	0.90	0.15	14.85		
	12th cross road LHS		1	53.60	0.90	0.15	7.24		
	12th cross road RHS		1	53.00	0.90	0.15	7.16		
	Wall								
	BHEL Layout								
	3rd cross road LHS		2	118.00	0.15	0.70	24.78		
	4th cross road LHS		2	115.00	0.15	0.70	24.15		
	4th cross road RHS		2	115.00	0.15	0.70	24.15		
	5th cross road LHS		2	110.00	0.15	0.70	23.10		
	5th cross road RHS		2	110.00	0.15	0.70	23.10		
	12th cross road LHS		2	53.60	0.15	0.60	9.65		
	12th cross road RHS		2	53.00	0.15	0.60	9.54		
							229.54		
	Culvert Raft		2	5.35	1.20	0.20	2.57		
	Culvert Wall		4	5.35	0.23	0.35	1.72		
							4.29		
							233.83	7070.20	**1653222.74**
	Approved Rate Rs.=	7070.20							
4	KSRB 4.9.2 : Providing T.M.T steel reinforcement for R.C.C work including straightening, cutting, bending, hooking, placing in position, lapping and / or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM complete as per specifications. Specificatio (I No-28.8.2,P No-229)								
		Ton							
	Steel for drain						12.97		
	Steel for Culvert						0.39		
							13.36	72326.98	**966288.45**
	Approved Rate Rs.=	72326.98							
5	supplying and fixing precast reinforced concrete slab 100mm thick of mix M20 using 20mm and downside graded granite metal using reinforcement 10mm dia steel at 150mm c/cboth ways cost of transportation, hire charges of machinary, machine cutting the vertical face to get plain even surface etc., complete with all leads and lift conveyance charges, labour charges inclusive of cost of materials.								
		Sqm							
	BHEL Layout								
	3rd cross road LHS		1	118.00	0.90	--	106.20		
	4th cross road LHS		1	115.00	0.90	--	103.50		
	4th cross road RHS		1	115.00	0.90	--	103.50		
	5th cross road LHS		1	102.00	0.90	--	91.80		
	5th cross road RHS		1	110.00	0.90	--	99.00		
	12th cross road LHS		1	50.00	0.90	--	45.00		
	12th cross road RHS		1	40.00	0.90	--	36.00		
							585.00	2337.00	**1367145.00**
	Approved Rate Rs.=	2337.00							
6	Providing and fixing Pre cast solid concrete kerb stones of size 450 x 150 x 400 mmmade out of CC 1:2:4 and finished with CM 1:3 plastering and finishing cutting etc., complete.								

	Description of work	Unit	No	Length	Breadth	Depth	Quantity	Rate	Amount
				m	m	m		in Rs	in Rs
		Nos							
	BHEL Layout								
	3rd cross road LHS		1	118.00			263.00		
	4th cross road LHS		1	115.00			256.00		
	4th cross road RHS		1	115.00			256.00		
	5th cross road LHS		1	110.00			245.00		
	5th cross road RHS		1	110.00			245.00		
	12th cross road LHS		1	53.00			118.00		
	12th cross road RHS		1	52.00			116.00		
							1499.00	477.00	**715023.00**
	Approved Rate Rs.=	477.00							
7	Painting two coats after filling the surface with synthetic enamel paint in approved shades on new plastered concrete surfaces, with materials, labour complete as per specifications.								
		Sqm							
	BHEL Layout								
	3rd cross road LHS		1	118.00		0.40	47.20		
	4th cross road LHS		1	115.00		0.40	46.00		
	4th cross road RHS		1	115.00		0.40	46.00		
	5th cross road LHS		1	110.00		0.40	44.00		
	5th cross road RHS		1	110.00		0.40	44.00		
	12th cross road LHS		1	53.00		0.40	21.20		
	12th cross road RHS		1	52.30		0.40	20.92		
							269.32	84.80	**22838.34**
	Approved Rate Rs.=	84.80							
8	KSRRB M300-13 Excavation for road way in hard rock (requiring blasting) by drilling and breaking, trimming of bottom and side slopes in accordance with requirements of lines, grades and cross sections, loading and stacking at site of cut road with lead of 1.00 km and complete as per specifications (excavated rock credited to contractor) MORTH specification no 301.								
		Cum							
	New Formation								
	BHEL Layout								
	1st Cross rd(from 1st Main rd)		1	86.30	9.10	0.40	314.13		
	2nd Cross rd(from Ambabhavani rd)		1	121.00	9.60	0.40	464.64		
	3rd Cross rd(from 1st Main rd)		1	116.30	10.00	0.40	465.20		
	4th Cross rd(from Ambabhavani rd)		1	112.30	8.40	0.40	377.33		
	5th Cross rd(from 1st Main rd)		1	105.70	9.00	0.40	380.52		
	10th Cross rd(from 1st Main rd)		1	110.00	6.30	0.40	277.20		
	12th Cross rd Side rd		1	14.40	5.90	0.40	33.98		
	Sai nagar								
	5th cross Rd		1	108.30	6.90	0.40	298.91		
	6th Cross Rd		1	114.30	6.45	0.40	294.89		
							2906.81	43.46	**126329.79**
	Approved Rate Rs.=	43.46							
9	KSRRB 300-50. Scarifying bituminous course 50mm to 75mm thick along with premix carpet / surface ressing by mechanical means attached with scarifier without disturbing the base and stacking the debris including cost of all labour charges, HOM complete as per specifications.								

	Description of work	Unit	No	Length	Breadth	Depth	Quantity	Rate	Amount
				m	m	m		in Rs	in Rs
		Sqm							
	New Formation								
	Approved Rate Rs.=	41.34					**0.00**	41.34	**0.00**
10	KSRRB 300-Compaction KSRRB 300-58. Compaction of original ground with maximum of 6 passes of 8 to 10 tonnes power roller including filling in depression occuring during rolling including cost of all labour, HOM of machinery complete as per specifications. MORTH / Chapter 3 KPWD S.R 2018-19 Page No. 147 I.No. 19.64								
		Cum							
	New Formation								
	BHEL Layout								
	1st Cross rd(from 1st Main rd)		1	86.30	9.10		785.33		
	2nd Cross rd(from Ambabhavani rd)		1	121.00	9.60		1161.60		
	3rd Cross rd(from 1st Main rd)		1	116.30	10.00		1163.00		
	4th Cross rd(from Ambabhavani rd)		1	112.30	8.40		943.32		
	5th Cross rd(from 1st Main rd)		1	105.70	9.00		951.30		
	10th Cross rd(from 1st Main rd)		1	110.00	6.30		693.00		
	12th Cross rd Side rd		1	14.40	5.90		84.96		
	Sai nagar								
	5th cross Rd		1	108.30	6.90		747.27		
	6th Cross Rd		1	114.30	6.45		737.24		
	Approved Rate Rs.=	6.36					**7267.02**	6.36	**46218.22**
11	Construction of granular sub-base Grading-V as Sub-base and drainage layer by providing coarse graded crushed stone aggregates of granite/trap/basalt material, mixing by mix in place method by rotavator at OMC,spreading in uniform layers with motor grader on prepared surface and compacting with vibratory power roller to achieve the 98 % proctor density, complete as per specifications.								
		Cum							
	New Formation								
	BHEL Layout								
	1st Cross rd(from 1st Main rd)		1	86.30	9.10	0.130	102.09		
	2nd Cross rd(from Ambabhavani rd)		1	121.00	9.60	0.130	151.01		
	3rd Cross rd(from 1st Main rd)		1	116.30	10.00	0.130	151.19		
	4th Cross rd(from Ambabhavani rd)		1	112.30	8.40	0.130	122.63		
	5th Cross rd(from 1st Main rd)		1	105.70	9.00	0.130	123.67		
	10th Cross rd(from 1st Main rd)		1	110.00	6.30	0.130	90.09		
	12th Cross rd Side rd		1	14.40	5.90	0.130	11.04		
	Sai nagar								
	5th cross Rd		1	108.30	6.90	0.130	97.15		
	6th Cross Rd		1	114.30	6.45	0.130	95.84		
	Approved Rate Rs.=	1855.00					**944.71**	1855.00	**1752440.67**
12	KSRRB M400-17. Providing, laying, spreading and compacting cushed stone aggregates of granite / trap / basalt to wet mix macadam specifications including pre mixing the material with water at OMC in mechanical mix plant carriage of mixed materials by tipper to site, laying in uniform layers with paver in sub-base/base course on well prepared surface and compacting with vibratory roller to achieve the desired density complete as per specifications(P.No-155,I No-20.18)								

	Description of work	Unit	No	Length	Breadth	Depth	Quantity	Rate	Amount
				m	m	m		in Rs	in Rs
		Cum							
	New Formation								
	BHEL Layout								
	1st Cross rd(from 1st Main rd)		1	86.30	9.10	0.250	196.33		
	2nd Cross rd(from Ambabhavani rd)		1	121.00	9.60	0.250	290.40		
	3rd Cross rd(from 1st Main rd)		1	116.30	10.00	0.250	290.75		
	4th Cross rd(from Ambabhavani rd)		1	112.30	8.40	0.250	235.83		
	5th Cross rd(from 1st Main rd)		1	105.70	9.00	0.250	237.83		
	10th Cross rd(from 1st Main rd)		1	110.00	6.30	0.250	173.25		
	12th Cross rd Side rd		1	14.40	5.90	0.250	21.24		
	Sai nagar								
	5th cross Rd		1	108.30	6.90	0.250	186.82		
	6th Cross Rd		1	114.30	6.45	0.250	184.31		
							1816.75	2001.28	**3635832.94**
	Approved Rate Rs.=	2001.28							
13	KSRRB M500-6. Providing and applying primer coat with S.S. bitumen emulsion on prepared surface of granular base such as WMM including cleaning of road surface and spraying primer at the rate of 0.60 kg / sqm using mechanical means complete as per specifications.								
		Sqm							
	New Formation								
	BHEL Layout								
	1st Cross rd(from 1st Main rd)		1	86.30	9.10		785.33		
	2nd Cross rd(from Ambabhavani rd)		1	121.00	9.60		1161.60		
	3rd Cross rd(from 1st Main rd)		1	116.30	10.00		1163.00		
	4th Cross rd(from Ambabhavani rd)		1	112.30	8.40		943.32		
	5th Cross rd(from 1st Main rd)		1	105.70	9.00		951.30		
	10th Cross rd(from 1st Main rd)		1	110.00	6.30		693.00		
	12th Cross rd Side rd		1	14.40	5.90		84.96		
	Sai nagar								
	5th cross Rd		1	108.30	6.90		747.27		
	6th Cross Rd		1	114.30	6.45		737.24		
							7267.02	33.92	**246497.15**
	Approved Rate Rs.=	33.92							
14	KSRRB M500-17. Providing and laying dense graded bituminous macadam using crushed aggregates of specified grading, premixed with VG30 grade bituminous binder and, transporting the hot mix to work site, laying to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction in all respects complete as per specifications. using 40/60 TPH capacity H.M.P. with Mechanical paver Gr.II (50 mm to 75 mm) with 4.5 % VG 30 Bitumen								
		Cum							
	New Formation								
	BHEL Layout								
	1st Cross rd(from 1st Main rd)		1	86.30	9.10	0.05	39.27		
	2nd Cross rd(from Ambabhavani rd)		1	121.00	9.60	0.05	58.08		
	3rd Cross rd(from 1st Main rd)		1	116.30	10.00	0.05	58.15		
	4th Cross rd(from Ambabhavani rd)		1	112.30	8.40	0.05	47.17		
	5th Cross rd(from 1st Main rd)		1	105.70	9.00	0.05	47.57		
	10th Cross rd(from 1st Main rd)		1	110.00	6.30	0.05	34.65		
	12th Cross rd Side rd		1	14.40	5.90	0.05	4.25		

	Description of work	Unit	No	Length	Breadth	Depth	Quantity	Rate	Amount
				m	m	m		in Rs	in Rs
	Sai nagar								
	5th cross Rd		1	108.30	6.90	0.05	37.36		
	6th Cross Rd		1	114.30	6.45	0.05	36.86		
							363.35	7428.48	**2699143.78**
	Approved Rate Rs.=	7428.48							
15	KSRRB 500-2. Cleaning the existing black topped surface with brooms, soft brushes and finally dusting with old gunny bags and / or compressed air to receive bituminous treatment including cost of all materials, labour, HOM complete as per specifications.								
		Sqm							
	New Formation								
	BHEL Layout								
	1st Cross rd(from 1st Main rd)		1	86.30	9.10		785.33		
	2nd Cross rd(from Ambabhavani rd)		1	121.00	9.60		1161.60		
	3rd Cross rd(from 1st Main rd)		1	116.30	10.00		1163.00		
	4th Cross rd(from Ambabhavani rd)		1	112.30	8.40		943.32		
	5th Cross rd(from 1st Main rd)		1	105.70	9.00		951.30		
	10th Cross rd(from 1st Main rd)		1	110.00	6.30		693.00		
	12th Cross rd Side rd		1	14.40	5.90		84.96		
	Sai nagar								
	5th cross Rd		1	108.30	6.90		747.27		
	6th Cross Rd		1	114.30	6.45		737.24		
							7267.02	5.30	**38515.18**
	Approved Rate Rs.=	5.30							
16	KSRRB 500-7. Providing and applying tack coat using 80/100 grade bitumen(VG10) on the prepared black topped surfaces at 2.5 kg per 10 sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM complete as per specifications								
		Sqm							
	New Formation								
	BHEL Layout								
	1st Cross rd(from 1st Main rd)		1	86.30	9.10		785.33		
	2nd Cross rd(from Ambabhavani rd)		1	121.00	9.60		1161.60		
	3rd Cross rd(from 1st Main rd)		1	116.30	10.00		1163.00		
	4th Cross rd(from Ambabhavani rd)		1	112.30	8.40		943.32		
	5th Cross rd(from 1st Main rd)		1	105.70	9.00		951.30		
	10th Cross rd(from 1st Main rd)		1	110.00	6.30		693.00		
	12th Cross rd Side rd		1	14.40	5.90		84.96		
	Sai nagar								
	5th cross Rd		1	108.30	6.90		747.27		
	6th Cross Rd		1	114.30	6.45		737.24		
							7267.02	12.72	**92436.43**
	Approved Rate Rs.=	12.72							

	Description of work	Unit	No	Length	Breadth	Depth	Quantity	Rate	Amount
				m	m	m		in Rs	in Rs
17	Providing and laying bituminous concrete 40mm thick with hot mix plant, using crushed aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site, laying with a paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction in all respects complete as per specifications. Clause 507 of MORTH V revision as per IRC SP-53-2015. using 40-60 TPH capacity HMP with mechanical paver grading II (30-45mm) with 5.4 % of modified bituminus binder consisting of 4.97% of VG-30 bitumen (60/70 grade) and 0.43% of plastomeric thermoplastics (waste plastic)								
		Cum							
	New Formation								
	BHEL Layout								
	1st Cross rd(from 1st Main rd)		1	86.30	9.10	0.04	31.41		
	2nd Cross rd(from Ambabhavani rd)		1	121.00	9.60	0.04	46.46		
	3rd Cross rd(from 1st Main rd)		1	116.30	10.00	0.04	46.52		
	4th Cross rd(from Ambabhavani rd)		1	112.30	8.40	0.04	37.73		
	5th Cross rd(from 1st Main rd)		1	105.70	9.00	0.04	38.05		
	10th Cross rd(from 1st Main rd)		1	110.00	6.30	0.04	27.72		
	12th Cross rd Side rd		1	14.40	5.90	0.04	3.40		
	Sai nagar								
	5th cross Rd		1	108.30	6.90	0.04	29.89		
	6th Cross Rd		1	114.30	6.45	0.04	29.49		
							290.68	8831.92	**2567267.80**
	Approved Rate Rs.=	8831.92							
18	KSRRB M800-13.Road Marking with Hot Applied Thermoplastic Compound with Reflectrising Glass Beads on Bituminous Surface/ Concrete Surface: Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35 standards specified. The finished surface to be level, uniform and free from streaks and holes complete as per specifications.								
		Sqm							
	New Formation								
	BHEL Layout								
	1st Cross rd(from 1st Main rd)		2.5	86.30	0.10		21.58		
	2nd Cross rd(from Ambabhavani rd)		2.5	121.00	0.10		30.25		
	3rd Cross rd(from 1st Main rd)		2.5	116.30	0.10		29.08		
	4th Cross rd(from Ambabhavani rd)		2.5	112.30	0.10		28.08		
	5th Cross rd(from 1st Main rd)		2.5	105.70	0.10		26.43		
	10th Cross rd(from 1st Main rd)		2.0	110.00	0.10		22.00		
	12th Cross rd Side rd		2.0	14.40	0.10		2.88		
	Sai nagar								
	5th cross Rd		2.5	108.30	0.10		27.08		
	6th Cross Rd		2.5	114.30	0.10		28.58		
							215.93	454.74	**98192.01**
	Approved Rate Rs.=	454.74							
	EIRL								
E1	providing and laying precast drain slabs of thick 250mm thick of mix M20 using graded granite jelly 20mm and down size with steel reinforcement, including form work, lift charges, curing and concrete finishing surface on both sides etc., completed as per drawing and direction of engineer in charge of work.								

	Description of work	Unit	No	Length	Breadth	Depth	Quantity	Rate	Amount
				m	m	m		in Rs	in Rs
		Sqm							
	Culvert		2	5.35	1.20		12.84		
							12.84	5418.00	69567.12
	Approved Rate Rs.=	5418.00							
E2	KSRRB M800-35. Supply and Installtion of Moulded Shank Raised Pavement Markers made of polycarbonate and ABS(Acrylonitrile Butadiene Styrene) moulded body and reflective panels with micro prismatic lens capable of providing total internal reflection of the light entering the lens face and shall support a load of 16000 kg tested in accordance to Specifications of Category A of MORTH Circular No RW/ NH/33023/10-97 – DO III Dt 11.06. 1997. The height, width and length shall not exceed 50 mm, 100 mm and 102 mm and with minimum reflective area of 13 Sqcm on each side and the slope to the base shall be 35 degree. The strength of detachment of the integrated cylindrical shanks, (of diameter not less than 19 mm and height not less than 30 mm) from the body is to be a minimum value of 500 Kg. Fixing will be by drilling holes on the road for the shanks to go inside, without nails and using epoxy resin based adhesive as per manufacturer's recommendation and complete as directed by the engineer.									
		Nos							
	BHEL Layout								
	1st Cross rd(from 1st Main rd)		3.0	12.00			36.00		
	2nd Cross rd(from Ambabhavani rd)		3.0	17.00			51.00		
	3rd Cross rd(from 1st Main rd)		3.0	16.00			48.00		
	4th Cross rd(from Ambabhavani rd)		3.0	16.00			48.00		
	5th Cross rd(from 1st Main rd)		3.0	15.00			45.00		
	10th Cross rd(from 1st Main rd)		2.0	15.00			30.00		
	12th Cross rd Side rd		2.0	2.00			4.00		
	Sai nagar								
	5th cross Rd		3.0	15.00			45.00		
	6th Cross Rd		3.0	16.00			48.00		
							355.00	357.22	126813.10
	Basic Rate Rs.=	337.00							
	6% AW Rs.=	20.22							
	Sub Total Rate Rs.=	357.22							
								Total Construction Cost	16893731.72
								Miscellaneous & Rounding off	2292.28
								Total Rs.	16896024.00

Assistant Engineer
Ward 03
BBMP

Assistant Executive Engineer
Yelahanka Satellite Sub Division
BBMP

Executive Engineer,
Yelahanka Division,
B.B.M.P, Bangalore - 64

Technical Sanction
Accorded For R.S.16829602410
Head of A/C. 2249
CER NO :..4D..... Dt:.30.01.2020

TA

CE (YNK)